



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,887	03/31/2004	Jason D. McIntosh	CE12394JME	7600

7590

05/16/2005

Larry G. Brown  
Motorola, Inc.  
Law Department  
8000 West Sunrise Boulevard  
Fort Lauderdale, FL 33322

EXAMINER

LEE, PING

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/814,887

Applicant(s)

MCINTOSH ET AL.

Examiner

Ping Lee

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/31/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-7 are objected to because of the following informalities: on line 12 of claim 1, the word "above" appears to mean --below--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-5, 8 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lynn (US 4,928,307).

Regarding claims 1-3, Lynn discloses a method for ensuring audio safety in an audio device (col. 1, lines 9-12), comprising the steps of: outputting an acoustic output signal with a processor (although not clearly shown, the processor is inherently included in the communication equipment), monitoring the acoustic output signal (by 24 and 26), feeding the monitored acoustic output signal to an analog safety circuit (30, 14), and adjusting from a first level (e.g. the level at time A) to a second level (e.g. the level between A and B) the acoustic output signal with the analog safety circuit (30,14) when the first level (level at time A) of the acoustic output signal reaches a predetermined safety threshold ("HIGH THRESHOLD"), wherein the monitoring, feeding and adjusting

Art Unit: 2644

steps enable the audio device to have an output capacity that is capable of driving the acoustic output signal to a sound pressure level above (the signal at the input of the pre-amp can be above the safety threshold) the predetermined safety threshold.

Regarding claim 3, Lynn shows the step of the adjusting the acoustic output signal with the analog safety circuit (30, 14) step comprises attenuating the acoustic output signal with the analog safety circuit (30, 14) such that the second level is lower than the first level (as shown in Fig. 3, the second level between period A and B is low than the first level at time A).

Regarding claim 4, Lynn shows the step of returning the acoustic output signal to a safety level (e.g. the level between B and C) that is below the predetermined safety threshold but higher than the second level once the acoustic output signal is adjusted to the second level.

Regarding claim 5, Lynn shows the step of holding the acoustic output signal at least substantially at the second level for a predetermined amount of time (as shown in Fig. 3, the level is constant for an amount of time between A and B) once the acoustic output signal is adjusted to the second level.

Claims 8 and 10-12 specify a system which corresponds to the method as specified in claims 1 and 3-5 respectively. The claimed sensor reads on 24 or 26, the claimed first feedback loop reads on 28.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2644

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn in view of Terai et al (US 6,041,126).

Regarding claim 7 and 14, Lynn fails to show a microphone. It was well known in the art that there were many ways to measure the loudspeaker output. Lynn teaches how to estimate the acoustic output reproduced by the loudspeaker using a peak detector to measure the signal at the input of the loudspeaker. Terai teaches another way in which the output of the loudspeaker is directly measured by a microphone. The device of Lynn is intended to protect the user from exposing to high level sound for a long duration (col. 1, lines 43-68). The sensor as taught in Lynn would provide a rough estimate on what the user might hear. A microphone as taught in Terai, on the other hand, directly measure what the user actually hears from the loudspeaker. Thus, it would have been obvious to one of ordinary skill in the art to modify Lynn in view of Terai by using a microphone to directly detect the loudspeaker output in order to more accurately estimate the amount of high-level sound the user is being exposed to.

6. Claims 2, 6, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn in view of Rasmusson (US 5,515,432).

Regarding claims 2, 6, 9 and 13, Lynn fails to show that the processor is being adjusted and signaled. Rasmusson teaches how to protect the loudspeaker in a telephone from being overloaded by gradually compressing the input audio signal depending on the input level (the output signals from the compression reads on the


Art Unit: 2644

claimed "third level" and "safety level"). Thus, it would have been obvious to one of ordinary skill in the art to modify Lynn in view of Rasmusson by adjusting the signal supplied to the telephone's loudspeaker in order to further protect the loudspeaker from overdriven.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 703-305-4865. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N. Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ping Lee  
Primary Examiner  
Art Unit 2644

pwl